

CLAIMS

What is claimed is:

1. A method for controlling exposure time in a digital image capture device comprising the steps of:

5 when a user-controlled exposure mode is selected and a start exposure signal is asserted,

a) capturing a first image and assigning the first image to a running total image;

b) displaying the running total image;

c) capturing a next image;

10 d) adding the next image to the running total image;

e) displaying the running total image; and

f) repeating steps (c) to (e) until a terminate exposure signal is asserted.

15 2. The method of claim 1 wherein the digital image capture device include an image sensor; wherein the step of capturing the first image includes the steps of

a_1) exposing the image sensor to light;

a_2) reading out an analog value from the image sensor; and

a_3) converting the analog value to a corresponding digital value; and wherein

the step of capturing the next image includes the steps of

20 c_1) exposing the image sensor to light;

c_2) reading out an analog value from the image sensor; and

c_3) converting the analog value to a corresponding digital value.

25 3. The method of claim 1 wherein the digital image capture device includes a display; and wherein the step of displaying the running total image includes displaying the running total image on the display.

4. The method of claim 1 further comprising the step of:

transferring a final image to a storage media.

5 5. The method of claim 4 wherein storage media is one of a removable storage media, volatile memory, and non-volatile memory.

6. The method of claim 1 further comprising the step of:
 wherein the asserted terminate exposure signal is a de-asserted start exposure signal; and

 wherein the start exposure signal is asserted and de-asserted by employing a
10 cable release.

15 7. The method of claim 1 wherein the step of asserting the start exposure signal includes the step of asserting the start exposure signal by employ a remote control; and wherein the step of asserting the terminate exposure signal includes the step of asserting the terminate exposure signal by employing a remote control.

20 8. The method of claim 7 wherein the remote control utilizes one of an infrared link, a radio frequency link, and an audio link.

9. The method of claim 7 wherein the digital image capture device is a digital camera.

25 10. A digital image capture device that has a user-controlled exposure mode comprising:

 a) a display for displaying images; and

 b) a user-controlled exposure mechanism coupled to the display for receiving a start exposure signal and a terminate exposure signal, responsive to the start exposure

signal for beginning an exposure, for providing visual feedback during the exposure through the display, and responsive to a terminate exposure signal for terminating the exposure.

5 11. The digital image capture device of claim 10 further comprising:

an enable signal for enabling the user-controlled exposure mechanism and setting the digital camera into a user-controlled exposure mode.

12. The digital image capture device of claim 10 further comprising:

10 a first button for use by a user to assert the start exposure signal and to assert the terminate exposure signal; and

a second button for use by a user to assert the enable signal.

13. The digital image capture device of claim 12 further comprising a
15 separate button for use by a user to assert the terminate exposure signal.

14. The digital image capture device of claim 10 wherein the user-controlled exposure mechanism includes:

20 a visual feedback module for providing visual feedback during the exposure through the display.

15. The digital image capture device of claim 10 wherein the digital image capture device is a digital camera.

25 16. A digital image capture device that has a user-controlled exposure mode comprising:

a) means for displaying images; and

b) user-controlled exposure means coupled to the display for receiving a start exposure signal and a terminate exposure signal, responsive to the start exposure signal for beginning an exposure, for providing immediate visual feedback during the exposure through the display, and responsive to a terminate exposure signal for terminating the exposure.

17. The digital image capture device of claim 16 further comprising:

an enable signal for enabling the user-controlled exposure mechanism and setting the digital camera into a user-controlled exposure mode.

18. The digital image capture device of claim 16 further comprising:

c) first means for use by a user to assert a start exposure signal;

d) second means for use by a user to assert a terminate exposure signal; and

e) third means for use by a user to set the digital camera into the user-controlled exposure mode.

19. The digital camera of claim 18 wherein the first means and the second means are a single button.

20. The digital camera of claim 16 wherein the user-controlled exposure means includes:

a visual feedback means for providing visual feedback during the exposure through the display.